Preliminary Amendment

rJ

Ŭ.S. Serial No.: 09/863,718

Filed: May 23, 2001

wherein the line retention section and the mounting section are arranged to dampen line vibration.

- 2. (Amended) The line hanger of claim 1, the locking barb being configured to lock against the attachment surface once the locking barb is inserted through an aperture of the attachment surface.
- 3. (Amended) The line hanger of claim 1, the locking barb being configured to lock against the supporting structure once the locking barb is inserted through an aperture of the supporting structure.
- 4. (Amended) The line hanger of claim 1, the locking barb being configured to lock against the mounting section once the locking barb is inserted through the mounting opening.
- 5. (Amended) The line hanger of claim 1, wherein the mounting opening is defined by a wall having a lip extending around the entire mounting opening.
- 6. (Amended) The line hanger of claim 1, wherein the mounting opening is defined by a wall having a lip, the locking barb including a notch that is configured to lock against the lip once the locking barb is inserted through the mounting opening.
- 7. (Amended) The line hanger of claim 6, wherein the locking barb includes two notches that are configured to lock against the lip once the locking barb is inserted through the mounting opening.
- 8. (Amended) The line hanger of claim 1, wherein the mounting opening is square.



U.S. Serial No.: 09/863,718 Filed: May 23, 2001

- 9. (Amended) The line hanger of claim 1, wherein the mounting opening is circular.
- 10. (Amended) The line hanger of claim 1, further comprising a compliant area, the compliant area being disposed between the retention section and the mounting section and configured to allow the first and second legs to be compressed toward each other and to expand away from each other by spring force.
- 11. (Amended) The line hanger of claim 10, wherein expansion of the first and second legs away from each other brings the first and second legs into contact with a wall that defines an aperture of the attachment surface once the locking barb is inserted through the aperture.
- 12. (Amended) The line hanger of claim 1, wherein the first and second legs include respective first and second spring fingers flexibly connected to and projecting inwardly from the respective first and second legs, the first and second spring fingers being configured to retain the line.
- 13. (Amended) The line hanger of claim 12, wherein each spring finger penetrates into the line to minimize longitudinal movement of the line with respect to the hanger.
- 14. (Amended) The line hanger of claim 12, wherein the first and second legs include a first and second curved member, respectively.
- 15. (Amended) The line hanger of claim 14, wherein the first and second spring fingers are located on the first and second curved members respectively.
- 16. (Amended) The line hanger of claim 1, wherein the retention section includes opposing first and second areas of resistance.

Filed: May 23, 2001

- 17. (Amended) The line hanger of claim 1, wherein the line hanger is a unitary structure.
- 18. (Amended) The line hanger of claim 1, wherein the line hanger is comprised of metal.
- 19. (Amended) The line hanger of claim 1, wherein the retention section includes a pair of opposing line stops connected thereto and projecting inwardly therefrom for inhibiting the line from moving into the mounting section.
- 20. (Amended) The line hanger of claim 19, wherein the opposing stops extend inwardly in a generally straight line from the first and second legs.
- 21. (Amended) The line hanger of claim 19, wherein the opposing stops are generally concave to match a curvature of the line.
- 22. (Amended) The line hanger of claim 1, wherein the first and second arms each include a pair of stop arms extending downwardly at an angle to engage a top of the attachment surface.
- 23. (Amended) The line hanger of claim 22, wherein the stop arms further include a side wall that extends generally orthogonal to the first and second legs.
- 24. (Amended) The line hanger of claim 1, wherein the line retention section is adapted to pivot relative to the mounting section, such that the line hanger can dampen line vibration.
- 25. (Amended) The line hanger of claim 24, wherein the line retention section is constructed of a flexible material, enabling the line retention section to pivot relative to the mounting section.

Filed: May 23, 2001

26. (Amended) A method for securing one or more lines to a supporting structure comprising:

providing one or more stackable line hangers each including a line retention section for accommodating a line, the line retention section including first and second legs extending therefrom, the first and second legs allowing the hanger to accommodate various sizes of lines, the first and second legs each including a locking barb configured to lock against an attachment surface having an aperture disposed therein, and a mounting section extending from the line retention section, the mounting section including a mounting opening disposed therein, wherein the retention section and the mounting section are arranged to dampen vibration of the line;

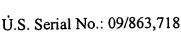
placing the retention section around the line; inserting the locking barb through the aperture; and locking the locking barb against the attachment surface.

Please amend claims 28-29 as follows:

- 28. (Amended) The method of claim 26, wherein the step of inserting the locking barb comprises inserting the locking barb through the mounting opening of another of the stackable line hangers and the step of locking the locking barb includes locking the locking barb against the mounting surface of another stackable line hanger.
- 29. (Amended) The method of claim 26, wherein the locking barb of another stackable line hanger including a notch, and wherein the method includes locking a notch of the locking barb of another stackable line hanger against a lip of a wall defining the mounting opening once the locking barb is inserted through the mounting opening.

Please amend claims 32-41 as follows:

32. (Amended) The method of claim 26, further including penetrating spring fingers of the first and second legs, respectively, into the line to minimize longitudinal movement of the line with respect to the hanger.



Filed: May 23, 2001

33. (Amended) One or more stackable line hangers, first and second ones of the hangers being configured to secure first and second lines, respectively, to a supporting structure, each hanger comprising:

a line retention section for accommodating a line, the line retention section including first and second legs extending therefrom, the first and second legs allowing the hanger to accommodate various sizes of lines, the first and second legs each including a locking barb configured to lock against an attachment surface; and

a mounting section extending from the line retention section, the mounting section including a mounting opening disposed therein;

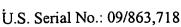
wherein the locking barb includes a folded over rib and is configured to lock against the mounting section of the first hanger once the locking barb is inserted through the mounting opening of the mounting section of the first hanger.

34. (Amended) One or more stackable line hangers, first and second ones of the hangers being configured to secure first and second lines, respectively, to a supporting structure, each hanger comprising:

a line retention section for accommodating a line, the line retention section including first and second legs extending therefrom, the first and second legs allowing the hanger to accommodate various sizes of lines, the first and second legs each including a locking barb configured to lock against an attachment surface; and

a mounting section extending from the line retention section, the mounting section including a mounting opening disposed therein, wherein the mounting opening is defined by a wall having a lip, the locking barb including at least two notches that are configured to lock against the lip once the locking barb is inserted through the mounting opening.

- 35. (Amended) The line hanger of claim 34, wherein the mounting opening is circular.
- 36. (Amended) The line hanger of claim 34, wherein the lip of the mounting opening extends around the entire mounting opening.



Filed: May 23, 2001

37. (Amended) One or more stackable line hangers, first and second ones of the hangers being configured to secure first and second lines, respectively, to a supporting structure, each hanger comprising:

a line retention section for accommodating a line, the line retention section including first and second legs extending therefrom, the first and second legs allowing the hanger to accommodate various sizes of lines, the first and second legs each including a locking barb configured to lock against an attachment surface, wherein the retention section further includes respective first and second curved portions, the first and second curved portions including respective first and second spring fingers flexibly connected to and projecting inwardly from the respective first and second legs, the first and second spring fingers being configured to retain the line; and

a mounting section extending from the line retention section, the mounting section including a mounting opening disposed therein.

38. (Amended) One or more stackable line hangers, first and second ones of the hangers being configured to secure first and second lines, respectively, to a supporting structure, each hanger comprising:

a line retention section for accommodating a line, the line retention section including first and second legs extending therefrom, the first and second legs allowing the hanger to accommodate various sizes of lines, the first and second legs each including a locking barb configured to lock against an attachment surface, wherein the retention section includes a pair of opposing line stops connected thereto and projecting inwardly and in a generally straight line therefrom; and

a mounting section extending from the line retention section, the mounting section including a mounting opening disposed therein,

wherein the opposing line stops are configured to inhibit line movement into the mounting section.



Filed: May 23, 2001

39. (Amended) A method for securing one or more lines to a supporting structure comprising:

providing one or more stackable line hangers each including a line retention section for accommodating a line, the line retention section including first and second legs extending therefrom, the first and second legs allowing the hanger to accommodate various sizes of lines, the first and second legs each including a locking barb configured to lock against an attachment surface having an aperture disposed therein, and a mounting section extending from the line retention section, the mounting section including a mounting opening disposed therein;

placing the retention section around the line;

penetrating first and second spring fingers of the first and second legs, respectively, into the line to minimize longitudinal movement of the line with respect to the hanger, wherein the first and second spring fingers are flexibly connected to and projecting inwardly from the respective first and second legs;

penetrating first and second opposing line stops of the first and second legs, respectively, into the line to minimize longitudinal movement of the line with respect to the hanger, wherein the first and second opposing line stops are flexibly connected to and projecting inwardly from the respective first and second legs;

inserting the locking barb through the aperture; and locking the locking barb against the attachment surface.

- 40. (Amended) A stackable line hanger of a snap-in type having a generally U-shaped body with arms which grip a line, distal ends of the arms being structured to snap-lock onto a line support, the hanger having a snap-in stacking provision.
- 41. (Amended) The apparatus defined by claim 40, wherein the distal ends of the arms are adapted to snap lock into an opening, and wherein the stacking provision comprises an opening.

Please amend claims 44-47 as follows:

Filed: May 23, 2001

44. (Amended) The apparatus defined by claim 42, wherein the distal ends of the arms have barbs with a cross-sectional curvature substantially matching a curvature of the boundary along an area of engagement with the aperture.

45. (Amended) A stack of line hangers comprising:

a first stackable snap-in line hanger having a generally U-shaped body with arms which grip a line, distal ends of which arms being structured to snap-lock onto a line support, the hanger having a stacking provision; and

a second stackable snap-in line hanger snap-locked onto the stacking provision.

46. (Amended) The apparatus defined by claim 45, wherein the distal ends of the arms are adapted to snap lock into an opening and wherein the stacking provision comprises an opening.

47. (Amended) The apparatus defined by claim 45, wherein the distal ends of the arms and the stacking provisions are structured such that wind-induced vibrations of the held lines is damped.

Please amend claims 50-51 as follows:

- 50. (Amended) The apparatus defined by claim 48, wherein the distal ends of the arms have barbs with a cross-sectional curvature substantially matching a curvature of the boundary along an area of engagement with the aperture.
- 51. (Amended) A line hanger of a snap-in type having a generally U-shaped body with arms which grip a line, distal ends of which arms have barbs structured to snap-lock onto an edge of an opening in a line support, each barb having an edge-engaging surface which is serrated or notched.

Please amend claim 53 as follows:

Filed: May 23, 2001

53. (Amended) The apparatus defined by claim 52, wherein the snap-in stacking provision comprises an opening adapted to be engaged by another hanger of the snap-in type.

Please amend claims 56-57 as follows:

- 56. (Amended) The apparatus defined by claim 54, wherein the barbs have a cross-sectional curvature substantially matching <u>a</u> curvature of the boundary along <u>an</u> area of engagement with the aperture.
- 57. (Amended) A line hanger of a snap-in type having a generally U-shaped body with arms which grip a line, distal ends of which arms have barbs structured to snap-lock onto an edge of an opening in a line support, the hanger arms each having an outwardly extending brace which abuts an opposite surface of the edge from that engaged by a barb, the brace being rigid and structured to dig into, rather than slide along, the opposite surface when the hanger is side loaded.

Please amend claims 61-62 as follows:

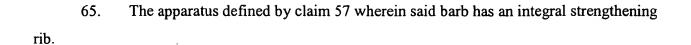
- 61. (Amended) The apparatus defined by claim 60, wherein the snap-in stacking provision comprises an opening adapted to be engaged by another hanger of the snap-in type.
- 62. (Amended) A line hanger of a snap-in type having a generally U-shaped body with arms which grip a line, distal ends of which arms have barbs structured to snap-lock onto an edge of an opening in a line support, the hanger arms each having means structured to abut an opposite surface of the edge from that engaged by a barb and create a fixed pivot point or line for the hanger when side loaded.

Please amend claim 64 as follows:

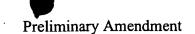
64. (Amended) The apparatus defined by claim 63, wherein the snap-in stacking provision comprises an opening adapted to be engaged by another hanger of the snap-in type.

Please add the following new claims 65-72

Filed: May 23, 2001



- 66. A hanger for a transmission line or other elongated article, comprising a generally U-shaped body with side members which grip the elongated article, the distal ends of which members being structured to lock into an opening in a support structure, said distal ends each being structured to engage a back peripheral surface around the opening and each having at least one substantially straight, outwardly angled stand-off tab which engages a front peripheral surface of the support structure at a distance from the opening.
 - 67. The hanger defined by claim 66 wherein each of said members has two such tabs.
 - 68. The hanger defined by claim 66 wherein said tab has a stiffening provision.
- 69. The hanger defined by claim 66 wherein said tab makes line engagement with said surface.
- To. A hanger for a transmission line or other elongated article, comprising a generally U-shaped body having a retention section adapted to engage the article, from which section extends a pair of legs, distal ends of which legs being structured to lock into an opening in a support structure, said legs each having between said retention section and said distal end an extension section which substantially increases a length of the leg, thereby decreasing an insertion force required to insert the hanger into said opening.
- The A hanger for a transmission line or other elongated article, comprising a generally U-shaped body having a retention section adapted to engage the article, from which section extends a pair of legs, distal ends of which legs being structured to lock into an opening in a support structure, said legs each having between said retention section and said distal end an intermediate section from which is formed, in a direction from the distal end toward the retention section an integral spring finger, the spring finger being deflected inwardly from the



Filed: May 23, 2001

intermediate section so as to engage and support an article residing in the retention section, a resiliency in the spring finger being adapted to accommodate articles of different diameters.

72. The hanger defined by claim 70 wherein each of said spring fingers is substantially S-shaped.